

WHAT IS CLAIMED IS:

1 1. A statistical analysis system for use
2 with a communication facility including remote terminal
3 apparatus for individual callers, wherein said remote
4 terminal apparatus may comprise a conventional tele-
5 phone instrument including voice communication means,
6 and digital input means in the form of an array of
7 alphabetic numeric buttons for providing identifi-
8 cation and statistical data, said control system
9 comprising:

10 interface means coupled to said communication
11 facility to interface said terminal apparatus for voice
12 and digital communication and including means to
13 provide signal values from data developed by said
14 terminal apparatus said interface means further
15 including a consumable key test means to qualify
16 callers with respect to limited use;

17 voice generator means coupled through said
18 interface means for actuating said terminal apparatus
19 as to provide vocal operating instructions to an
20 individual caller; and

21 means connected to said interface means for
22 processing said statistical data as to isolate a subset
23 of said individual callers.

1 2. A statistical analysis system for use
2 with a communication facility including terminal
3 apparatus for individual callers, wherein said terminal
4 apparatus may comprise a conventional telephone
5 instrument including voice communication means and
6 digital input means in the form of an array of alpha-
7 betic numeric buttons for providing identification and
8 statistical data, said control system comprising:

9 interface means coupled to said communication
10 facility to interface said terminal apparatus for voice

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11 and digital communication and including means to
12 provide signals representative of identification and
13 statistical data developed by said terminal apparatus;

14 voice generator means coupled through said
15 interface means for actuating said terminal apparatus
16 as to provide vocal operating instructions to an
17 individual caller;

18 record means connected to said interface
19 means for initiating a file and storing data relating
20 to specific of said callers;

21 means coupled to said interface means and
22 said record means for assigning individual designations
23 to callers and storing said designations in said record
24 means, said designations including representations
25 indicative of the calling order sequence of said
26 individual callers; and

27 means connected to said record means for
28 processing statistical data as to identify a subset of
29 said individual callers.

1 3. A statistical analysis system for use
2 with a communication facility including terminal
3 apparatus for individual callers, wherein said terminal
4 apparatus may comprise a conventional telephone
5 instrument including voice communication means, and
6 digital input means in the form of an array of alpha-
7 betic numeric buttons for providing identification and
8 statistical data, said control system comprising:

9 interface means coupled to said communication
10 facility to interface said terminal apparatus for voice
11 and digital communication and including means to
12 provide signals representative of identification and
13 statistical data developed by said terminal apparatus;

14 voice generator means coupled through said
15 interface means for actuating said terminal apparatus

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as to provide vocal operating instructions to an individual caller; and

manual terminal means for use by a person to communicate directly with at least one of said individual callers, said manual terminal means being coupled to said interface means and responsive to predetermined conditions to couple said manual terminal means to a caller terminal.

4. A system according to claim 3 further including means connected to said interface means for processing said statistical data as to isolate a subset of said individual callers and thereby actuate said manual terminal means.

5. A statistical analysis system for use with a communication facility including terminal apparatus for individual callers, wherein said terminal apparatus may comprise a conventional telephone instrument including voice communication means, and digital input means in the form of an array of alphabetic numeric buttons for providing identification and statistical data, said control system comprising:

interface means coupled to said communication facility to interface said terminal apparatus for voice and digital communication and including means to provide signals representative of identification and statistical data developed by said terminal apparatus;

voice generator means coupled through said interface means for actuating said terminal apparatus as to provide vocal operating instructions to an individual caller;

record means connected to said interface means for initiating a file and storing identification

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20 data and statistical data for specific callers inclu-
21 ding data developed by said terminal apparatus;

22 means coupled to said interface means and
23 said record means for assigning individual designations
24 to callers and storing said designations in said record
25 means; and

26 means for recalling data stored in said
27 record means in response to said individual designa-
28 tions.

1 6. A statistical analysis system for use
2 with a communication facility including terminal
3 apparatus for individual callers, wherein said terminal
4 apparatus may comprise a conventional telephone
5 instrument including voice communication means, and
6 digital input means in the form of an array of alpha-
7 betic numeric buttons for providing identification and
8 statistical data, said control system comprising:

9 interface means coupled to said communication
10 facility to interface said terminal apparatus for voice
11 and digital communication and including means to
12 provide signals representative of identification and
13 statistical data developed by said terminal apparatus;

14 voice generator means coupled through said
15 interface means for actuating said terminal apparatus
16 as to provide vocal operating instructions to an
17 individual caller;

18 record means connected to said interface
19 means for initiating a file and storing identification
20 data and statistical data for specific callers inclu-
21 ding data developed by said terminal apparatus;

22 means coupled to said interface means and
23 said record means for assigning individual designations
24 to callers and storing said designations in said record
25 means, said designations including representations of

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the telephone number of the terminal apparatus used by a caller; and

means connected to said record means for processing statistical data as to identify a subset of said individual callers.

7. A statistical analysis system for use with a communication facility including terminal apparatus for individual callers, wherein said terminal apparatus may comprise a conventional telephone instrument including voice communication means, and digital input means in the form of an array of alphabetic numeric buttons for providing identification and statistical data, said control system comprising:

interface means coupled to said communication facility to interface said terminal apparatus for voice and digital communication and including means to provide signals representative of identification and statistical data developed by said terminal apparatus;

voice generator means coupled through said interface means for actuating said terminal apparatus as to provide vocal operating instructions to an individual caller;

record means connected to said interface means for initiating a file and storing identification data and statistical data for specific callers including data developed by said terminal apparatus; and

means coupled to said interface means and said record means for assigning individual designations to callers and storing said designations in said record means, said designations including an encrypted representation of said data developed by said terminal apparatus. .

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1 8. A statistical analysis system for use
2 with a communication facility including remote terminal
3 apparatus for individual callers, wherein said remote
4 terminal apparatus may comprise a conventional tele-
5 phone instrument including voice communication means
6 and digital input means in the form of an array of
7 alphabetic numeric buttons for providing identification
8 and statistical data and wherein said facility may
9 provide calling terminal digital signals to a called
10 station representative of a remote calling terminal,
11 said control system comprising:

12 interface structure coupled to said commu-
13 nication facility to interface said terminal apparatus
14 for voice and digital communication and including means
15 to provide signal values from signals representative of
16 data developed by said terminal apparatus;

17 voice generator means coupled through said
18 interface means for actuating said terminal apparatus
19 as to provide vocal operating instructions to an
20 individual caller;

21 analysis means connected for processing data
22 from a plurality of callers in combination to isolate a
23 select subset of said callers by interrelated proces-
24 sing; and

25 call data analyzer structure for modifying
26 said data from a plurality of callers under control of
27 said terminal digital signals.

1 9. A control system according to claim 8
2 further including record means connected to said
3 interface means for initiating a file and storing said
4 terminal digital signals as identification at least in
5 part for a caller.

1 10. A control system according to claim 8
2 further including switch means whereby passage of said
3 data from a plurality of callers to said analysis means
4 is controlled by said terminal digital signals.

1 11. A statistical analysis system for use
2 with a communication facility including remote terminal
3 apparatus for individual callers, wherein said remote
4 terminal apparatus may comprise a conventional tele-
5 phone instrument including voice communication means
6 and digital input means in the form of an array of
7 alphabetic numeric buttons for providing identification
8 and statistical data and wherein said facility may
9 provide called terminal digital signals to a called
10 station representative of the called station, said
11 control system comprising:

12 interface means coupled to said communication
13 facility to interface said terminal apparatus for voice
14 and digital communication and including means to
15 provide signal values from signals representative of
16 data developed by said terminal apparatus;

17 voice generator means coupled through said
18 interface means for actuating said terminal apparatus
19 as to provide vocal operating instructions to an
20 individual caller;

21 analysis means connected to said record means
22 for processing said statistical data from a plurality
23 of callers in combination and in accordance with a
24 plurality of distinct formats to isolate a select
25 subset of said callers by interrelated processing; and

26 means for actuating one of said distinct
27 formats in accordance with said called terminal digital
28 signals.

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1 12. A statistical analysis system for use
2 with a communication facility including remote terminal
3 apparatus for individual callers, wherein said remote
4 terminal apparatus may comprise a conventional tele-
5 phone instrument including voice communication means
6 and digital input means in the form of an array of
7 alphabetic numeric buttons for providing identification
8 and statistical data, said control system comprising:

9 coupling structure including a plurality of
10 interface units each capable of accommodating a
11 plurality of communication paths coupled to said
12 communication facility to interface said terminal
13 apparatus for voice and digital communication and
14 including means to provide signal values from signals
15 representative of data developed by said terminal
16 apparatus;

17 voice generator means in said interface means
18 coupled for actuating said terminal apparatus as to
19 provide vocal operating instructions to an individual
20 caller;

21 record means connected to said interface
22 means for initiating a file and storing identification
23 data and statistical digital data for specific callers
24 including data developed by said terminal apparatus;
25 and

26 analysis means connected to said record means
27 for processing said statistical data from a plurality
28 of callers in combination to isolate a select subset of
29 said callers by interrelated processing.

1 13. A system according to claim 12 further
2 including means for queuing said remote stations to
3 said coupling means whereas to sequence interface
4 communications.

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1 14. A statistical analysis system for use
2 with a communication facility including remote terminal
3 apparatus for individual callers, wherein said remote
4 terminal apparatus may comprise a conventional tele-
5 phone instrument including voice communication means
6 and digital input means in the form of an array of
7 alphabetic numeric buttons for providing identification
8 and statistical data, said control system comprising:

9 interface structure coupled to said commu-
10 nication facility to interface said terminal apparatus
11 for voice and digital communication and including means
12 to provide signal values from signals representative of
13 data developed by said terminal apparatus;

14 voice generator means coupled through said
15 interface means for actuating said terminal apparatus
16 as to provide vocal operating instructions to an
17 individual caller;

18 analysis means connected for processing data
19 from a plurality of callers in combination to isolate a
20 select subset of said callers by interrelated process-
21 ing; and

22 qualification means for qualifying access
23 from said remote terminal apparatus to said analysis
24 means.

1 15. A system according to claim 14 wherein
2 said qualification means comprises means for limiting
3 access from a remote terminal to said analysis means on
4 the basis of accesses per interval of time.

1 16. A system according to claim 14 wherein
2 said qualification means comprises means for limiting
3 access from a remote terminal to said analysis means
4 under control of said signals representative of data
5 developed by said terminal apparatus.

1 17. A system according to claim 16 wherein
2 said qualification means includes a look-up table.

1 18. A system according to claim 16 wherein
2 said qualification means includes a use-rate
3 calculator.

1 19. A statistical analysis system for use
2 with a communication facility including remote terminal
3 apparatus for individual callers, wherein said remote
4 terminal apparatus may comprise a conventional tele-
5 phone instrument including voice communication means
6 and digital input means in the form of an array of
7 alphabetic numeric buttons for providing identification
8 and statistical data, said control system comprising:

9 interface structure coupled to said commu-
10 nication facility to interface said terminal apparatus
11 for voice and digital communication and including means
12 to provide signal values from signals representative of
13 data developed by said terminal apparatus;

14 voice generator means coupled through said
15 interface means for actuating said terminal apparatus
16 as to provide vocal operating instructions to an
17 individual caller; and

18 analysis means connected for processing data
19 from a plurality of callers in combination to isolate a
20 select subset of said callers by interrelated process-
21 ing including a display structure for visually display-
22 ing data regarding said select subset.

1 20. A system according to claim 19 further
2 including a printer.

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1 21. A statistical analysis system for use
2 with a communication facility including remote terminal
3 apparatus for individual callers, wherein said remote
4 terminal apparatus may comprise a conventional tele-
5 phone instrument including voice communication means
6 and digital input means in the form of an array of
7 alphabetic numeric buttons for providing identification
8 and statistical data, said control system comprising:

9 interface structure coupled to said commu-
10 nication facility to interface said terminal apparatus
11 for voice and digital communication and including means
12 to provide signal values from signals representative of
13 data developed by said terminal apparatus;

14 voice generator means coupled through said
15 interface means for actuating said terminal apparatus
16 as to provide vocal operating instructions to an
17 individual caller;

18 a sequencer for developing sequence data
19 signals as identification data;

20 record means connected to said interface
21 means for initiating a file and storing identification
22 data and statistical digital data for specific callers
23 including data developed by said terminal apparatus;
24 and

25 analysis means connected to said record means
26 for processing said statistical data from a plurality
27 of callers in combination to isolate a select subset of
28 said callers by interrelated processing.

1 22. A statistical analysis system for use
2 with a communication facility including remote terminal
3 apparatus for individual callers, wherein said remote
4 terminal apparatus may comprise a conventional tele-
5 phone instrument including voice communication means
6 and digital input means in the form of an array of

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7 alphabetic numeric buttons for providing identification
8 and statistical data, said control system comprising:

9 interface structure coupled to said commu-
10 nication facility to interface said terminal apparatus
11 for voice and digital communication and including means
12 to provide signal values from signals representative of
13 data developed by said terminal apparatus;

14 voice generator means coupled through said
15 interface means for actuating said terminal apparatus
16 as to provide vocal operating instructions to an
17 individual caller;

18 a qualification unit for developing qualifi-
19 cation data signals as identification data;

20 record means connected to said interface
21 means for initiating a file and storing identification
22 data and statistical digital data for specific callers
23 including data developed by said terminal apparatus;
24 and

25 analysis means connected to said record means
26 for processing said statistical data from a plurality
27 of callers in combination to isolate a select subset of
28 said callers by interrelated processing.

1 23. A statistical analysis system for use
2 with a communication facility including remote terminal
3 apparatus for individual callers, wherein said remote
4 terminal apparatus may comprise a conventional tele-
5 phone instrument including voice communication means
6 and digital input means in the form of an array of
7 alphabetic numeric buttons for providing identification
8 and statistical data, said control system comprising:

9 interface structure coupled to said commu-
10 nication facility to interface said terminal apparatus
11 for voice and digital communication and including means

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12 to provide signal values from signals representative of
13 data developed by said terminal apparatus;

14 voice generator means coupled through said
15 interface means for actuating said terminal apparatus
16 as to provide vocal operating instructions to an
17 individual caller;

18 a designation unit for developing designation
19 data signals as identification data consisting of at
20 least two data elements;

21 record means connected to said interface
22 means for initiating a file and storing identification
23 data and statistical digital data for specific callers
24 including data developed by said terminal apparatus;
25 and

26 analysis means connected to said record means
27 for processing said statistical data from a plurality
28 of callers in combination to isolate a select subset of
29 said callers by interrelated processing.

1 24. A statistical analysis system for use
2 with a communication facility including remote terminal
3 apparatus for individual callers, wherein said remote
4 terminal apparatus may comprise a conventional tele-
5 phone instrument including voice communication means
6 and digital input means in the form of an array of
7 alphabetic numeric buttons for providing identification
8 and statistical data, said control system comprising:

9 interface structure coupled to said commu-
10 nication facility to interface said terminal apparatus
11 for voice and digital communication and including means
12 to provide signal values from signals representative of
13 data developed by said terminal apparatus;

14 voice generator means coupled through said
15 interface means for actuating said terminal apparatus

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16 as to provide vocal operating instructions to an
17 individual caller;
18 a sequencer for developing sequence data
19 signals as identification data;
20 a qualification unit for developing qualifi-
21 cation data signals as identification data;
22 a designation unit for developing designation
23 data signals as identification data;
24 record means connected to said interface
25 means for initiating a file and storing identification
26 data and statistical digital data for specific callers
27 including data developed by said terminal apparatus;
28 and
29 analysis means connected to said record means
30 for processing said statistical data from a plurality
31 of callers in combination to isolate a select subset of
32 said callers by interrelated processing.

1 25. A statistical analysis system for use
2 with a communication facility including remote terminal
3 apparatus for individual callers, wherein said remote
4 terminal apparatus may comprise a conventional tele-
5 phone instrument including voice communication means
6 and digital input means in the form of an array of
7 alphabetic numeric buttons for providing identification
8 and statistical data, said control system comprising:
9 interface structure coupled to said commu-
10 nication facility to interface said terminal apparatus
11 for voice and digital communication and including means
12 to provide signal values from signals representative of
13 data developed by said terminal apparatus;
14 voice generator means coupled through said
15 interface means for actuating said terminal apparatus
16 as to provide vocal operating instructions to an
17 individual caller;

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18 record means connected to said interface
19 means for initiating a file and storing identification
20 data and statistical digital data for specific callers
21 including data developed by said terminal apparatus;
22 analysis means connected to said record means
23 for processing said statistical data from a plurality
24 of callers in combination to isolate a select subset of
25 said callers by interrelated processing; and
26 a qualification unit for controlling access
27 of callers to said analysis means in accordance with
28 the content of said record means.

1 26. A statistical analysis system for use
2 with a communication facility including remote terminal
3 apparatus for individual callers, wherein said remote
4 terminal apparatus may comprise a conventional tele-
5 phone instrument including voice communication means
6 and digital input means in the form of an array of
7 alphabetic numeric buttons for providing identification
8 and statistical data, said control system comprising:
9 interface structure coupled to said commu-
10 nication facility to interface said terminal apparatus
11 for voice and digital communication and including means
12 to provide signal values from signals representative of
13 data developed by said terminal apparatus;
14 voice generator means coupled through said
15 interface means for actuating said terminal apparatus
16 as to provide vocal operating instructions to an
17 individual caller;
18 a designation unit for developing designation
19 data signals as identification data and including an
20 encryptor; and

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21 analysis means connected to said record means
22 for processing said statistical data from a plurality
23 of callers in combination to isolate a select subset of
24 said callers by interrelated processing.

1 27. A statistical analysis system for use
2 with a communication facility including remote terminal
3 apparatus for individual callers, wherein said remote
4 terminal apparatus may comprise a conventional tele-
5 phone instrument including voice communication means
6 and digital input means in the form of an array of
7 alphabetic numeric buttons for providing identification
8 and statistical data, said control system comprising:
9 interface structure coupled to said commu-
10 nication facility to interface said terminal apparatus
11 for voice and digital communication and including means
12 to provide signal values from signals representative of
13 data developed by said terminal apparatus;
14 voice generator means coupled through said
15 interface means for actuating said terminal apparatus
16 as to provide vocal operating instructions to an
17 individual caller; and
18 analysis means connected for processing data
19 from a plurality of callers in combination to isolate a
20 select subset of said callers by interrelated process-
21 ing including a random number generator for selecting
22 said subset.

1 28. A process for statistical analysis of
2 data for use with a communication facility including
3 remote terminal apparatus for individual callers,
4 wherein said remote terminal apparatus may comprise a
5 conventional telephone instrument including voice
6 communication means and digital input means in the form
7 of an array of alphabetic numeric buttons for providing

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8 identification and statistical data, said process
9 including the steps of:
10 interfacing said communication facility to
11 provide voice signals and receive digital identifica-
12 tion and answer signals representative respectively of
13 identification data and answer data developed by said
14 terminal apparatus under control of said caller;
15 generating voice signals and supplying said
16 voice signals to actuate said terminal apparatus, as to
17 provide vocal operating instructions to a caller;
18 providing sequence signals representative of
19 sequence data indicating the time sequence of a call
20 with reference to the calls from other callers;
21 qualifying callers based on said digital
22 identification signals;
23 designating callers based on said digital
24 identification signals;
25 initiating files and storing data from
26 qualified callers including, (1) answer data for
27 specific callers as indicated by said answer signals,
28 (2) sequence data as indicated by said sequence signals
29 and (3) identification data as indicated by said
30 identification signals;
31 providing external data signals represen-
32 tative of external data distinct from said answer data
33 provided from said callers; and
34 comparing said answer data from said callers
35 and analyzing said answer data with said external data
36 in combination to isolate a select subset of said
37 callers.

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